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Comments on the Identities of Certain *Tantilla* (Squamata: Colubridae) from Guatemala, with the Descriptions of Two New Species

By

JONATHAN A. CAMPBELL

Department of Biology
The University of Texas at Arlington
Arlington, Texas 76019, USA.

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<An examination of types representing Guatemalan species

ABSTRACT An examination of types representing Guatemalan species of *Tantilla* of the *T. taeniata* group reveals that current concepts for several species are incorrect and that several species remain undescribed. *Tantilla taeniata* Bocourt (1883) is a valid species occurring in the seasonally dry highlands of south-central and southeastern Guatemala; it is characterized by a broad pale middorsal stripe involving the vertebral scale row and adjacent portions of the paravertebral rows, a ventrolateral coloration that is not darker than the pigment of the dorsolateral stripe, and relatively few ventrals. This species does not occur on the mesic Atlantic versant of Guatemala as previously thought; the large species inhabiting the Atlantic versant is described as new. The name *Tantilla jani* may be associated with a small, but robust, species inhabiting the Pacific versant and characterized by an incomplete nuchal collar. Most individuals previously ascribed to *T. jani* are a gracile species having a complete collar; these represent an undescribed species.

Key words: Reptilia; Squamata; Colubridae; *Tantilla*; *Tantilla taeniata*; *Tantilla jani*; new species; Guatemala.

RESUMEN Un examen detallado de los tipos representantes del grupo de *Tantilla taeniata* en Guatemala revela que los paradigmas actuales para varias de sus especies son incorrectos y que varias especies aun se encuentran no descritas. *Tantilla taeniata* Bocourt (1883) es una especie válida, ocurre en las tierras altas estacionalmente áridas del sur central y este de Guatemala, y se caracteriza por poseer una pálida y ancha línea que ocupa la escama vertebral y regiones adyacentes de las escamas paravertebrales, una coloración ventrolateral no más oscura que el pigmento de la línea dorsolateral, y relativamente pocas escamas ventrales. Esta especie no ocurre en las laderas húmedas del norte de Guatemala, como antes se pensaba; la especie grande que habita esta área se describe como nueva. El nombre *Tantilla jani* se asocia con una especie pequeña, robusta, y de un característico collar nuchal incompleto que habita la vertiente Pacífica. La mayor parte de los individuos que han sido designados *T. jani* son una especie grácil de collar completo; esta representa una especie no descrita.

Palabras claves: Reptilia; Squamata; Colubridae; *Tantilla*; *Tantilla taeniata*; *Tantilla jani*; nuevas especies; Guatemala.

INTRODUCTION

The *Tantilla taeniata* group contains about a dozen species and is distributed from southern Mexico to Panama and the west coast of northern South America. In the last revision of this group (Wilson and Meyer 1971), six species were recognized (*T. flavilineata*, *jani*, *oaxacae*, *reticulata*, *striata*, and *taeniata*). *Tantilla cuniculator* Smith (1939) was placed in the *T. taeniata* group by Savitsky and Smith (1971b). An additional five species have been described since Wilson and Meyer's (1971) revision: *T. briggsi* (Savitsky and Smith 1971a), *T. cuesta* (Wilson 1982), *T. tayrae* (Wilson 1983a), *T. slavensi* (Pérez-Higareda et al. 1985), and *T. tecta* (Campbell and Smith 1997). *Tantilla trilineata* Peters (1880) was considered by Wilson (1974:54) and Wilson and Meyer (1971:19) to have indeterminate status, but was treated as a valid species by Savitsky and Smith (1971a: 170).

Snakes within the genus *Tantilla* are rather conservative with regard to many of the standard external morphological features used in differentiating small colubrid snakes. Moreover, many species are too poorly represented in collections to allow for any rational assessment of variation. Further complicating matters, four types bearing the locality of only "Guatemala" were described in the last

century. The potential for confusion is enhanced by the presence of several somewhat similar species of *Tantilla* in Guatemala with imprecise type-localities and because numerous and widespread locations were visited by members of the English and French exploratory teams that collected the material on which the names of several of these species are based. (See Günther, 1885-1902, and Duméril et al., 1870-1909, for a synthesis of the herpetological material gathered by these expeditions.) The names *Honolocranion melanocephalum* variété *fuscum* Bocourt (1883:589), *H. taeniatum* Bocourt (1883:587), *H. trivittatum* Müller (1885:678), and *H. jani* Günther (1895:148) are all based on specimens from "Guatemala." The first of these refers to a dark collared species, seemingly within the *T. melanocephala* complex. The type of *H. melanocephalus fuscum* was examined by Wilson (1992:2), who placed it within the synonymy of *T. melanocephalum* and suggested that the specimen did not originate from Guatemala. This taxon is not considered further here. However, the other three names represent pale-striped species and are problematical in that they have been misapplied consistently to various populations of snakes almost since the time of their appearance.

Taxonomic studies of large groups with convoluted taxonomic histories have a tendency to metastasize, with several additional questions arising for every one answered. I have endeavored to focus my inquiries to those pertinent to the Guatemalan herpetofauna. However, in doing so, I have become aware of various other potential problems within the *T. taeniata* group that may provide future investigators fertile ground for inquiry and discovery. These are detailed in the appropriate sections.

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MATERIALS AND METHODS

Characters in the diagnosis and descriptions of new taxa follow the format in Campbell and Smith (1997) and are similar to those used for other small terrestrial or fossorial snakes to facilitate comparisons. We follow Savage's (1973) terminology of scales in the loreal region and Dowling (1951) in the manner in which ventrals are counted. The sex of individuals was determined by visual examination of relative tail length and girth, and often reconfirmed by checking for the presence of inverted hemipenes by making a small midventral incision on the proximal section of the tail. Head and scale measurements were taken to the nearest 0.1 mm using digital calipers held under a dissecting microscope; snout-vent length and total length were recorded to the nearest 1.0 mm using a meter stick. Measurements are abbreviated to: snout-vent length, SVL; total length, TL; head length, HL; and head width, HW. Scale dimensions were taken at the longest or widest points along the longitudinal or perpendicular axis of the body, respectively. Tooth counts were taken only on the right side. Dorsolateral and ventrolateral stripes refer to the broad stripes between the pale middorsal and lateral stripes and the lateral stripes and ventrals, respectively. Color notes were taken from preserved specimens or from field notes and photographs of live specimens taken with

Lumiere® or Kodachrome 64® slide film. Photographs are catalogued into the UTA Slide Collection. Most specimens were fixed in formalin (diluted to 10% of stock solution) and transferred within a week to several months into 70% ethanol for permanent storage. Drawings were made using a Zeiss SV8 stereomicroscope and associated drawing tube.

Through the courtesy of curators from the British Museum-Natural History, London (BM), the California Academy of Science (CAS), Museum of Natural History at The University of Kansas (KU), the Museum National d'Histoire Naturelle, Paris (MNHN), the Museum of Vertebrate Zoology, Berkeley (MVZ), the Naturhistorisches Museum, Basel (NHMB), and The University of Texas at Arlington (UTA), I have had the opportunity to examine material belonging to the *T. taeniata* group and several critical types including those of *Tantilla cuesta* Wilson (1982), *T. jani* (Günther, 1895), *T. taeniata* (Bocourt, 1883), *T. tayrae* Wilson (1983a), and *T. trivittatum* (Müller, 1885). Additional information on the external morphology of various groups of snakes was taken from Bocourt (1883), Campbell and Smith (1997), Günther (1895), Wilson (1982, 1983a), and Wilson and Meyer (1971).

THE IDENTITY OF *TANTILLA TAENIATA* (BOCOURT, 1883)

In the most recent reviews (Wilson, 1982, 1983b), *T. taeniata* was defined as being "A species of *Tantilla* with a brown dorsum with a distinct pale middorsal stripe (gold or orangish tan in life) occupying the middorsal scale row and adjacent halves of the paravertebral rows and a pale lateral stripe (cream to gold in life) on adjacent halves of scale rows 3 and 4. The lower half of the paraventral scale row is cream, the upper half is dark brown. Both the middorsal and lateral stripes are outlined above and below with a dark brown stripe occupying the adjacent half row. The head pattern consists of a pale nuchal band (complete, divided medially, or divided both medially and laterally) on a dark brown background, which crosses the last

supralabial. The venter may be either cream or reddish orange. Ventrals and subcaudals range from 143 to 178 and 58 to 67, respectively." *Tantilla taeniata* was diagnosed by Wilson (1983b) from all congeners by "possession of a pale middorsal stripe occupying the middorsal row and adjacent halves of the paravertebral rows, a pale lateral stripe occupying adjacent halves of rows 3 and 4, and a paraventral scale row divided sharply into dark and pale ventral halves." The distribution of the species was given as "low and moderate elevation (near sea level to 1000 m) of the Caribbean versant from Oaxaca, Mexico, to Nicaragua (including the Bay Islands and is also distributed on the Pacific versant in eastern Oaxaca, Mexico, El Salvador,

and Honduras" (Wilson, 1983b). As mapped by Wilson (1983b), the species is distributed across the northern and eastern highlands of Guatemala.

In attempting to place Guatemalan specimens, several problems arise with Wilson's (1983b) concept of *T. taeniata*. First, no species of *Tantilla* known to occur in the eastern or northern portion of the country possesses the traits listed. Likewise, specimens from other parts of the country fail to conform to all characteristics provided, but individuals do share some of them. To arrive at his hypodigm for *T. taeniata*, Wilson (1983b) included specimens from both the Atlantic and Pacific versants of Central America (Honduras, El Salvador, and Nicaragua), from the Islas de Bahía, and from the southern portion of the Isthmus of Tehuantepec of Mexico. Certainly, the wide range of ventrals he reports as diagnostic for *T. taeniata* is characteristic of no species in Guatemala and there is little doubt that he included data for multiple species in his diagnosis. I have recently examined the type of *T. taeniata*, which agrees closely with specimens from southeastern Guatemala, and a description of this material follows.

DESCRIPTION OF THE TYPE OF *TANTILLA TAENIATA*

In the type (MNHNP 1666), cream middorsal stripe occupying vertebral scale row and about adjacent third of paravertebral rows, extending from three scale lengths behind collar to tip of tail (narrower on about anterior 20 mm of body and on tail); middorsal stripe bordered laterally with continuous dark brown on lateral portion of paravertebral scale row; adjacent halves of scale rows 3 and 4 cream, forming pale lateral stripe, extending from 2.5 scale lengths behind collar to tip of tail; pale lateral stripe bordered above and below by dark brown on upper portion of scale row 4 and lower portion of scale row 3; brown dorsolateral and ventrolateral stripes similar in color; pale brown dorsolateral stripes occupying scale rows 5 and 6 and adjacent halves of scale rows 4 and 7; pale brown ventrolateral stripes occupying row 2 and adjacent halves of scale rows 1 and 3; lower half of scale row 1 (paraventrals) cream and similar in color to ventrals, which are immaculate; subcaudals cream but infringed upon by dark brown from ventrolateral stripe; dorsum of head mostly dark brown with small irregular crescent-shaped marking on each supraocular; upper portion of rostral, internasals, and anterior portion of prefrontals tan, somewhat paler than top of head; yellowish cream preocular spot involving first supralabial, postnasal, about anterior two thirds of second supralabial, and portions of scales adjacent to these scales; large postocular spot involving supralabial 5, lower portion of supralabial 4, about anterior halves of supralabial 6 and anterior temporal, all but anterior border of lower postocular, and encroaching on upper postocular; dark brown pigment surrounding eye not reaching margin of upper lip; dark pigment posterior to postocular spot reaching margin of lip; pale cream collar involving posterior tips of parietals, posterior temporals, and about posterior half of ultimate supralabial; dorsally, collar extends about 1.5 scale lengths behind pos-

terior tip of parietals; chin mostly immaculate except for several small pale brown spots on mental and first four pairs of infralabials.

The type of *T. taeniata* has 1 preocular, 2 postoculars, 7 supralabials, 6 infralabials, and 1 + 1 temporals per side, a loreal is absent, the anal scale is divided and there are 150 ventrals and 67 divided subcaudals. It is a male and has a HL of 9.5 mm, HW of 6.3 mm, SVL of 255, and TL of 341 mm (tail length 25% of TL).

TANTILLA IN SOUTHEASTERN GUATEMALA

As mentioned previously, the type of *Tantilla taeniata* bears only the locality of "Guatemala." Although there are many groups of small, secretive snakes in the Neotropics that remain poorly known, many members of the genus *Tantilla* perhaps are contenders for being the most efficient at escaping human detection. Previously, not a single species of the genus was known from the southeastern highlands of Guatemala (Campbell and Vannini 1989, Stuart 1954). This sector of Guatemala, known as the "oriente" to most persons living in the region, has been defined as that part of the country lying to the east of the Río Las Vacas Valley in which Guatemala City is located, to the south of the Río Motagua Valley, and to the north of the Pacific coastal plain (Stuart 1954). This region was referred to as the Jalapan faunal area by Campbell and Vannini (1989). The highlands in the region are not nearly as extensive as elsewhere in Guatemala, although some dozen peaks or ridges exceed 1500 m in elevation, and a maximum of about 2500 m is reached in the Miramundo area of Jalapa. The southeastern highlands have not been the focus of as many field investigations as some other regions in Guatemala (Stuart 1954), although it has been more easily accessible for longer than most other regions of the country. An analysis of the herpetofaunal composition of the region revealed that it is most similar to that of the Fuegan faunal area located to the southwest and west, which includes the Pacific versant from slightly east of Escuintla to the Mexican border (Campbell and Vannini 1989). A few endemic species of amphibians and reptiles are known from the Jalapan area, including *Pseudoeurycea expectata*, *Abronia campbelli*, and *Adelphicos daryi*.

A small series of snakes of the genus *Tantilla* have become available from the southeastern Guatemalan highlands during the last decade. These specimens have been compared with the type of *T. taeniata* (MNHNP 1666) and clearly represent the same species, which in turn permits a more accurate understanding of the species.

VARIATION IN *TANTILLA TAENIATA*

In preservative (alcohol after formalin) the color pattern of UTA R-21774 from the Departamento de Santa Rosa is similar to that of the type of *T. taeniata* and there is no doubt that the two specimens are conspecific. The new specimens has a tan middorsal stripe arising about three scale lengths behind collar, extending entire length of body and most of tail, becoming obscure on about posterior fifth of tail; middorsal stripe occupying vertebral scale row and

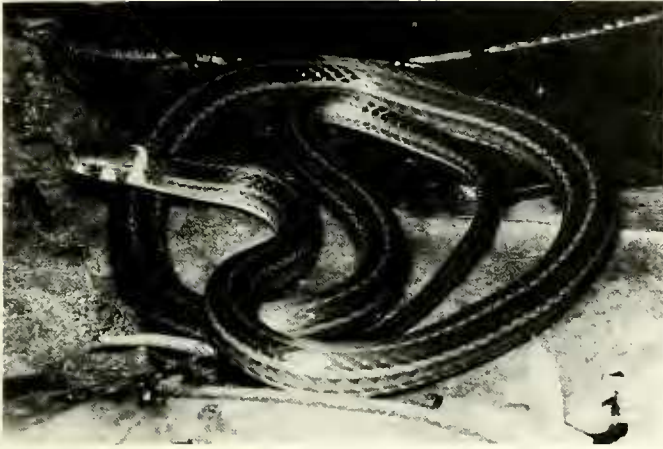


Fig. 1. *Tantilla taeniata* (UTA R-21774), an adult female, 415 mm TL (reproduced from UTA Slide No. 4111).

about a third of adjacent paravertebral scale rows, edged with unbroken dark brown laterally; tan lateral stripes on upper half of scale row 3 and lower half of scale row 4, edged with unbroken dark brown above and below on upper half of scale rows 4 and lower half of scale row 3, respectively; lateral stripes beginning about 3–4 scale lengths behind collar and extending entire length of body onto the tail (Fig. 1), becoming obscure on the distal fourth of the tail; ground color of dorsolateral stripes between pale middorsal and lateral stripes medium brown, ventrolateral dark stripe between lateral pale stripe and ventrals also brown but distinctly paler than dorsolateral stripes; lower half of paraventral scale row pale on about anterior third of body, subsequently the amount of pale area on scales diminishing, only about lower fourth of paraventral scales pale on posterior fourth of body; lateral edges of most ventrals on posterior half of body with small dark spots, otherwise venter of body and tail immaculate cream anteriorly and yellow posteriorly; top of head dark brown with periphery of major head plates even darker; dorsum of snout without pale spot, but relatively pale in color; small white spot on adjacent portions of first and second supralabials and posterior nasal; prominent white postocular spot covering fifth supralabial and adjacent portions of fourth and sixth supralabials, lower postocular, and anterior temporal; dark pigment surrounding eye not reaching lip margin; distinctive white nuchal collar immediately behind parietals and secondary temporals, collar a single dorsal scale long, bordered posteriorly with slightly darker brown than ground color of dorsolateral stripes, merging with pale coloration of venter, not interrupted middorsally (Fig. 2), a small intrusion of nuchal collar involving about posterior third of ultimate supralabial; mental and first two pairs of infralabials each with single small, dark gray spots, larger spots on infralabials 4–5, rest of lower jaw and throat immaculate cream.

In life, the middorsal and lateral pale stripes are rust-colored and distinctly edged with dark brown; the dorso-

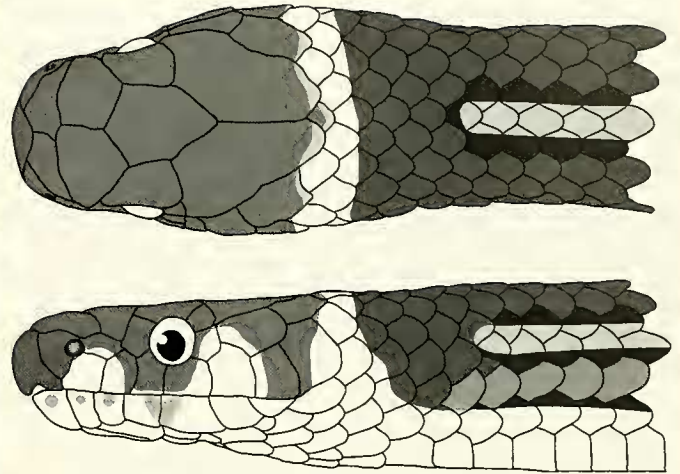


Fig. 2. Dorsal (upper) and lateral (lower) aspects of the head and anterior part of body of *Tantilla taeniata* (UTA R-21774), head length 11.2 mm from front face of rostral to posterior end of mandible.

lateral dark stripes are a rich coffee brown with the top of the head slightly darker; the ventrolateral dark stripes are medium brown, somewhat paler than the dorsolateral stripes. The pale lateral head spots and collar are pearl white. The venter is pale purplish pink anteriorly, grading to a darker salmon color on the posterior two-thirds of the body and tail. The upper part of the iris is bronze, the lower part is almost black.

The type of *Homalocranium trivittatum* Müller (1885) is desiccated and brittle, but retains much of its color pattern. This specimen (NHMB 2119) is an adult male and agrees with *T. taeniata* in all aspects of color and scutellation. There are 145 ventrals and 68 subcaudals; the pale middorsal and lateral stripes extend most of the length of the tail. These stripes, originally described as "yellowish (orange?)" in the freshly preserved specimen, are now white.

An analysis of the variation in the Guatemalan series of snakes and the type of *Tantilla taeniata* allows for a more precise diagnosis of the taxon to be restated as a moderate-sized species of the *Tantilla taeniata* group reaching a maximum known size of 415 mm that may be distinguished from all other members of the genus by having; (1) conspicuous rust-colored or tan (often becoming white in preservative) middorsal stripe extending length of body and well onto tail, occupying vertebral scale row and adjacent thirds of paravertebral scale rows, and distinctly bordered laterally by continuous, narrow, dark brown stripes; (2) pale rust-colored or tan (often becoming white in preservative) lateral stripe on each side occupying adjacent halves of scale rows 3 and 4, distinctly bordered laterally by continuous, narrow, dark brown stripes, and extending to distal portion of tail; (3) dark coloration of ventrolateral stripe similar to or slightly paler than dorsolateral stripe; (4) lower portion of paraventral scale row unpigmented and colored similarly to ventrals; (5) lateral

edges of ventrals usually immaculate, but a few dark spots present, especially on posterior of trunk in some; (6) venter purplish pink to salmon in life; (7) uninterrupted nuchal collar just posterior to parietals, 1–2 scales long dorsally; (8) males with 143–152 ventrals and 66–70 subcaudals; and (9) tail comprising 24–27% of the total length in males.

A species of *Tantilla* from the Pacific versant of Guatemala described subsequently in this paper differs from *T. taeniata* in usually having a distinctive pale spot on the dorsum of the snout involving the internasals and adjacent portions of the rostral and prefrontals, pale nuchal collar situated slightly more anteriorly and involving the posterior tips of parietals, narrow middorsal stripe reduced to a series of spots, confined to middle of vertebral scale row, and extending only to about the level of the vent, neither the middorsal or lateral pale lines distinctly edged with dark pigment, ground color of ventrolateral dark stripes paler brown than dorsolateral pigment, dark pigment of ventrolateral stripe extending onto lateral edges of ventrals, 39–51 subcaudals in males (versus 66–70 in *T. taeniata*), and a relative tail length in males of 17–22% of total length.

In *Tantilla tecta*, known from a single female (Campbell and Smith, 1997), there is a pale spot on top of the snout, the middorsal stripe is confined to the median third of the vertebral scale row, the nuchal collar is relatively broad and involves the posterior tips of the parietals, the pale spots on the side of the head are small with a small indistinct spot on adjacent portions of supralabials 1 and 2 and the pale postocular spot does not reach the lip margin, and the brown pigment from the ventrolateral stripe reaches the lateral edges of the ventrals, involving the lower portion of the paraventral scale row.

Tantilla briggsi, *cuesta*, *cuniculator*, and *tayrae* differ from *T. taeniata* in that a pale middorsal line is absent or restricted to a few scales on the anterior portion of the body.

Tantilla flavilineata, *oaxacae*, and *reticulata* differ from *T. taeniata* in having a broader pale lateral stripe located on the fourth dorsal scale row and adjacent portions of the third and fifth rows. A higher number of ventrals is present in males of *T. flavilineata* (154–160), *T. reticulata* (158–159), *T. briggsi* (172), and usually *T. oaxacae* (151–158) than in *T. taeniata* (143–152), whereas fewer subcaudals are present in males of *T. flavilineata* (51–52), *T. striata* (33–42), *T. oaxacae* (46–52), *T. cuniculator* (53–55), *T. tayrae* (46–49), *T. jani* (44–47), and usually *T. reticulata* (60–67) than in *T. taeniata* (66–70).

The diagnosis for *Tantilla taeniata* provided by Wilson (1982) almost certainly represents a composite of several species. The identification of various specimens reported from Honduras, northern Nicaragua, and eastern El Salvador should be reconfirmed. It seems likely that *T. tritaeniata* Smith and Williams (1966) from the Islas de Bahía (Bonacca) of Honduras is either a valid taxon or the name is synonymous with a taxon other than *T. taeniata*. The higher number of ventrals (161) in the female holotype and the presence of a collar that is interrupted medially and laterally would seem to preclude its association with *T.*

taeniata. Another name previously placed in synonymy with *T. taeniata* is *T. triseriata* Smith and Smith (1951). Given the high number of ventrals (163) of the female holotype, it is doubtful that this name should be associated in synonymy with *T. taeniata*.

Tantilla taeniata is known with certainty from the Antigua Basin in the Departamento de Sacatepéquez eastward through the valley in which Guatemala City is located (Río Las Vacas) to the moderately elevated area surrounding Laguna El Pino in northern Departamento de Santa Rosa at elevations of 1020 to 1550 m. The known localities are within the pine-oak zone, which experiences a moderately harsh dry season from about November to mid-May. Pines are no longer present at several localities; they were felled years ago, and only dense secondary growth remains. I have not examined the specimen of *Tantilla* reported from near La Unión, El Salvador, by Wilson (1974), but it may represent *T. taeniata*. Although this species has remained rare in museum collections, two specimens (UTA R-22849, 28533) were collected recently within the Guatemala City limits and another (UTA R-29935) from Antigua Guatemala. Both of these localities were visited by most of the early collectors. I propose that the type-locality for *T. taeniata* be restricted to the vicinity of Guatemala City.

One *Tantilla taeniata* from Santa Rosa (UTA R-21774) was crawling in damp leaf-litter at the base of a large tree in coniferous forest containing widely scattered oaks at about 2330 hr. Another specimen from Santa Rosa (UTA R-22848) was encountered under a pile of pine needles. The only other specimen with collecting remarks is from the limits of Guatemala City (UTA R-22849); it was crawling on a small trail in a ravine containing heavy vegetation in the afternoon.

A species of *Tantilla* from eastern and northern Guatemala is undescribed. It may be known as:

Tantilla impensa new species

Holotype.— The University of Texas at Arlington (UTA) R-38196 (field no. ENS 5199), an adult female from Aldea San Miguelito, Sierra de Caral, Municipio de Morales, Izabal, Guatemala, 460 m (15°22' N, 88°43' W), collected by E. N. Smith on 2 July 1994.

Paratypes.— All from Guatemala: *Alta Verapaz*: N base of Sierra de las Minas, Finca Pueblo Viejo, grounds of casa grande, 10 m (UTA R-26344); *Izabal*: Municipio Los Amates, Sierra del Espíritu Santo, S side Cerro del Nylon, 1200 m (UTA R-28530); Municipio Los Amates, Sierra del Espíritu Santo, Aldea San Francisco, 550 m (UTA R-28531); Municipio Los Amates, Sierra del Espíritu Santo, ca. 1 km NE Aldea San Antonio, ca. 660 m (UTA R-28532); Municipio de Morales, Sierra de Caral, San Miguelito, 450 m (UTA R-37227); near Livingston, Punta Cocoli, 2 m (UTA R-39550); Aldea Vista Hermosa, 650 m (KU 191103); 10.4 km W Puerto Santo Tomás, 585 m (KU 187350); *Huehuetenango*: near Barillas, Finca Chiblac Buena Vista, ca. 930 m, 15° 53' N, 91° 15' W (UTA R-42840–41).

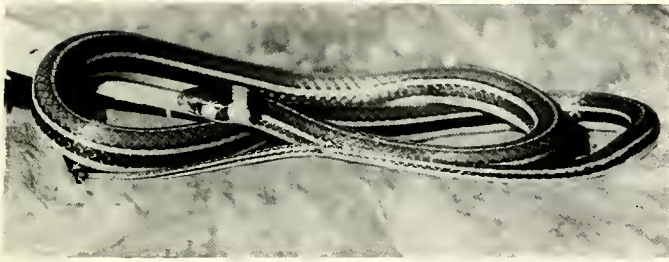


Fig. 3. *Tantilla impensa* (UTA R-38196—holotype), an adult female, 642 mm TL (reproduced from UTA slide no. 18047).

Referred Material.—Guatemala: *Alta Verapaz*: N base Sierra de las Minas, Finca Pueblo Viejo, bank of Río Tinajas, 2 km E Pueblo Viejo, 10 m (UTA R-26343). This specimen clearly represents this new species, but is badly damaged and the head is missing.

Diagnosis.—A large species of the *Tantilla taeniata* group reaching a maximum known TL of ca. 725 mm that may be distinguished from all other members of the genus by having (1) conspicuous rust-colored or tan middorsal stripe extending length of body and well onto tail, occupying about the medial two-thirds of the vertebral scale row, and distinctly bordered laterally by a series of dark brown dashes on lateral portions of vertebral scales (Fig. 3); (2) pale lateral stripes, white anteriorly and grading to yellow and then buff posteriorly, occupying adjacent halves of scale rows 3 and 4, distinctly bordered above by continuous, narrow, dark brown stripe, and extending to distal portion of tail; (3) dark coloration of ventrolateral stripe darker than dorsolateral pigmentation; (4) lower portion of paraventral scale row unpigmented and colored similarly to ventrals; (5) lateral edges of ventrals immaculate; (6) venter white in life; (7) nuchal collar complete or interrupted dorsally, usually located posterior to parietals and about a scale and a half length long dorsally; (8) males with 163–165 ventrals and 68–72 subcaudals, females with 164–172 ventrals and 69–72 subcaudals; and (9) tail comprising 21–24% of the total length in males and 22–25% in females. This species is compared with other Guatemalan members of the *T. taeniata* group in Table 1.

Tantilla taeniata has a middorsal stripe expanded laterally to include all of the vertebral scale row and adjacent portions of the paravertebral rows in contrast to *T. impensa* in which the middorsal stripe is wholly contained within the vertebral scale row. The dark lateral edging of the middorsal stripe in *T. impensa* is restricted to the lateral portions of scales in the vertebral row and reduced to a series of dashes; in *T. taeniata* the dark edging is on the lateral portions of scales in the paravertebral scale row and forms a continuous line. *Tantilla impensa* can also be distinguished from *T. taeniata* by having more ventrals in males (163–165 versus 143–152) and by having a ventrolateral dark stripe that is much darker (usually dark brown or gray-brown) than the dorsolateral stripe (in *T. taeniata* the ventrolateral stripe is similarly colored or noticeably paler than the dor-

solateral stripe). Some differences in color between these two species are most easily observed in life, but may also be retained in preserved specimens. In *T. taeniata*, the nuchal color is bright white, the lateral pale lines are rust-colored, and the venter is pinkish or salmon, whereas in *T. impensa* the nuchal collar always has some suffusion of tan, the lateral pale lines are white or pale buff, and the venter is off-white. *Tantilla impensa* attains a much larger size than other species in the *T. taeniata* group; intact females are known to reach a total length of 642 mm (UTA R-38196). Another even larger female (UTA R-28530) has a snout-vent length of 563 mm but has an incomplete tail; it is estimated that this specimen would have been about 725 mm in total length.

In *Tantilla briggsi*, *cuniculator*, *jani*, *tayrae*, and a species described subsequently in this paper, the pale middorsal line is absent or reduced to a series of spots on the vertebral scale row which are most prominent on the anterior portion of the body. The lateral stripes of *T. briggsi*, *cuniculator*, *tayrae*, and the species described subsequently are indistinct on the posterior portion of the trunk; further, they are relatively narrow in *T. cuniculator* and *T. jani*, usually occupying no more than adjacent thirds of scale rows 3–4. In *T. flavilineata* and *T. oaxacae*, the lateral stripes are relatively wide, occupying scale row 4 and adjacent portions of rows 3 and 5. In *T. reticulata*, scale row 4 and adjacent halves of rows 3 and 5 are brown. The lower portion of the paraventral scale row is dark or darkly mottled in *T. briggsi*, *cuniculator*, *flavilineata*, *jani*, *oaxacae*, *reticulata*, *tayrae*, *tecta*, and the species described subsequently. The nuchal color is reduced to a pair of spots in *T. jani* and *T. striata*. A higher number of ventrals is present in males (females unknown) of *T. briggsi* (172) than *T. impensa* (163–165) and fewer ventrals are present in females (males unknown) of *T. slavensi* (158–159) and *T. tecta* (148) than *T. impensa* (164–172). Fewer ventrals characterize both sexes of *T. cuniculator* (139–154), *T. jani* (143–147), *T. oaxacae* (145–158), *T. tayrae* (140–146), and the species described subsequently (139–154). Fewer subcaudals are present in both sexes of *T. cuniculator* (48–53), *T. flavilineata* (43–52), *T. jani* (44–47), *T. oaxacae* (46–52), *T. striata* (31–42), *T. tayrae* (44–49), and the species described subsequently (37–45).

Tantilla triseriata Smith and Smith (1951) and *T. tritaeniata* Smith and Williams (1966) were previously placed in the synonymy of *T. taeniata* by Wilson and Meyer (1971), but almost certainly in error. These names also cannot be associated with *T. impensa* as they are based on individuals possessing a middorsal stripe that occupies the vertebral scale row and adjacent halves of the paravertebral scale rows and fewer segmental counts (163 ventrals and 61 subcaudals, 161 ventrals and 65 subcaudals, respectively) for females than is known for *T. impensa* (164–172 ventrals and 69–72 subcaudals).

Description of holotype.—Adult female, 642 mm in total length; tail length 142 mm (22% of total); head length 20.2 mm from front face of rostral to posterior end of mandible; head width 17.2 mm at broadest point (at level of

Table 1. Selected features of Guatemalan members of the *Tamtilia taeniata* group.

Character	<i>T. cuniculator</i>	<i>T. impensa</i>	<i>T. jani</i>	<i>T. vulcani</i>	<i>T. taeniata</i>	<i>T. tecta</i>
Pale middorsal stripe	Usually absent; sometimes faintly indicated on anterior of body	Well defined; confined to vertebral scale row	Absent or reduced to a series of small spots on vertebral scale row	Reduced to series of spots on vertebral scale row	Well defined, involving vertebral scale row and adjacent thirds of paravertebral rows	Narrow, occupying median third of vertebral scale row, becoming indistinct on posterior of trunk
Pale lateral stripe on scale rows 3-4	Narrow, often confined to upper portion of row 3; on posterior of trunk	On adjacent halves of scale rows; extending to distal portion of tail	Narrow, occupying about adjacent thirds of scale rows; extending to proximal portion of tail	On adjacent halves of scale rows; becoming indistinct on posterior of body	On adjacent halves of scale rows; extending to distal part of tail	On upper two-thirds of row 4 and lower third of row 3, extending to distal portion of tail
Dark coloration on dorsolateral vs. ventrolateral region of trunk	Paler	Paler	Paler	Paler	Similar or slightly darker	Paler
Lower portion of paravertebral scales	Darkly mottled	Pale	Sparse dark mottling	Darkly mottled	Pale	Darkly mottled
Lateral edges of ventrals	Immaculate	Immaculate	Brown spotting	Dark edged	Usually immaculate, but sometimes a few small dark spots	Darkly mottled
Pale nuchal collar	Complete	Complete or interrupted dorsally	Reduced to pair of spots dorsally	Complete	Complete	Complete
Ventrals: (males)	139-145	163-165	144-147	139-147	143-152	—
(females)	140-154	164-172	144	152-154	—	148
Subcaudals: (males)	53-58	68-72	44-47	40-51	66-70	—
(females)	48-53	69-72	47	37-45	—	54
Maximum known length	220 mm (male)	ca. 725 mm (female)	242 mm (female)	246 mm (male)	415 mm (female)	222 mm (male)
Distribution	Northern Guatemala and Yucatan Peninsula	Foothills of northern and eastern highlands of Guatemala	Pacific versant of Guatemala	Pacific versant of Guatemala	Antigua Basin and southeastern highlands of Guatemala	Northeastern Petén of Guatemala

angle of mouth); head moderately distinct from neck; snout truncate in dorsal view; eye small, snout about 3.9 times as long as horizontal distance across eye; pupil circular; rostral about 1.9 times broader than high; internasals 1.3 times wider than long, laterally in contact with anterior and posterior nasals; prefrontals large, slightly wider than long, laterally in contact with posterior nasal and preocular; median prefrontal suture 0.4 times as long as frontal; frontal 1.4 times longer than wide; parietals 1.6 times longer than wide, median suture 0.7 of frontal length; nasals completely divided, nostril located mostly in posterior portion of anterior nasal; no loreal; 1/1 preoculars; 2/2 postoculars; temporals 1 + 1, separating supralabials 5–7 from parietal; supralabials 7/7, first in contact with nasals, second in contact with postnasal and preocular, third in contact with preocular, third and fourth in contact with orbit, fifth and sixth in contact with anterior temporal, and seventh the largest and in contact with anterior and posterior temporals; mental 1.6 times broader than long, not in contact with anterior pair of chinshields; anterior chinshields well developed, about twice as long as wide; posterior chinshields not well differentiated from gulars, about half of size of anterior chinshields; posterior chinshields separated from first ventral by two gulars and two preventrals; infralabials 6/6, first pair in contact along ventral midline, first four pairs in contact with anterior chinshields, fourth pair largest; dorsal scales smooth, in 15 longitudinal rows throughout length of body; no apical pits apparent; dorsal scales in 6 rows at level of tenth subcaudal; ventrals 172; anal divided; subcaudals 69, paired; anal glands extending posteriorly for length of three subcaudals.

In preservative (alcohol after formalin), beige middorsal stripe arising about two scale lengths behind collar, extending well onto tail; middorsal stripe occupying about median two thirds of vertebral scale row, edged with series of dark brown dashes on lateral edges of vertebral scales; beige lateral stripes on upper half of scale row 3 and lower half of scale row 4, beginning about two scale lengths behind collar and extending to distal portion of tail; pale lateral stripe bordered above by continuous dark gray-brown line on upper half of scale row 4; dark gray-brown below lateral stripe, including lower half of scale row 3, all of 2, and upper half of row 1; ventrolateral stripe much darker than pale brown dorsolateral area (scale rows 5–7); lower half of paraventral scale row cream; venter of body and tail cream; top of head pale brown with dark gray-brown on lateral and posterior portions of parietals; no pale spot on top of snout; complete pale nuchal collar immediately behind parietals and secondary temporals (posterior tips of these scales pale tan but darker than collar); collar 2 scales long, beige dorsally and white laterally, bordered posteriorly with dark gray-brown, merging with pale coloration of venter; no well defined preocular spot but nasals and first two supralabials mostly pale with slight suffusion of brown pigment; prominent white postocular spot including most of fifth supralabial, including lingual margin, and adjacent portions of lower postocular and

anterior temporal; circumorbital region dark gray-brown, with this color extending ventrally to cover most of supralabials 3 and 4 (lip margin edged with white) and posteriorly through upper postocular to merge with dark pigment on parietal; on posterior side of head, dark gray-brown separating postocular spot and nuchal collar, this dark pigment merging with that along lateral portion of parietal; infralabials mostly cream except dark spots or mottling along mental and first two pairs of infralabials and large dark spots on posterior portion of infralabial 3 and lower half of infralabial 4.

The right maxillary bears 16 stout teeth; the anterior 14 are relatively small and increase in size posteriorly; a small diastema separates the last two teeth which are much enlarged and have anterolateral grooves. The distal portion of all maxillary teeth is compressed anteroposteriorly and bladeliike.

Variation.—There are four males and eight females in the type-series. The largest male is 459 mm in TL with a tail of 97 mm (21% of total). The largest female has a SVL of 563 mm but is missing most of the tail; it is estimated that this specimen would be about 725 mm in TL. The tail/TL ratio is 21–24% for males and 22–25% for females. Males have 163–165 ventrals and 68–72 subcaudals; females have 164–172 ventrals and 69–72 subcaudals. The pale nuchal collar is interrupted dorsally in five of 11 specimens; it is complete in the remaining six, but constricted dorsally in four of these. The nuchal collar infringes on the posterior edge of the parietals in all specimens and the parietal tips of these scales usually are pale brown but darker than the collar. In only one specimen does the collar actually include the tips of the parietals. The length of the collar varies from 1.0 to 2.0 (\bar{x} = 1.5) dorsal scale lengths.

Etymology.—The species name is derived from the Latin *impensus*, meaning ample or large, in allusion to the impressive size attained by this species, which may be the largest in the genus *Tantilla*.

Distribution and habitat.—This species occurs across the northern slopes and foothills of eastern Guatemala from the Montañas del Mico, Sierra del Merendón, and Sierra del Espíritu Santo westward to the northwestern portion of the Sierra de Los Cuchumatanes. It occurs in tropical and subtropical wet forest at elevations from near sea level to 1200 m.

This snake has been found crawling across trails or in leaf-litter at various times throughout the day from 630 am to 1830 hr at ambient temperatures of 25–27° C; one individual was encountered along a trail in the forest shortly after dusk at 1910 hr when the ambient temperature had dropped to 20.5° C. Most individuals were in primary forest on slopes covered with leaf litter; only a single snake was in a coffee grove, but this was near primary forest. One individual was along a stream at midmorning and three were collected in rotting logs. A large centipede is in the stomach of KU 191103.

THE IDENTITY OF *TANTILLA JANI* (GÜNTHER, 1895)

In the most recent reviews (Wilson and Meyer, 1971; Wilson, 1982, 1985), diagnostic features of *Tantilla jani* include an indistinct middorsal stripe or series of pale dots; pale lateral stripes on adjacent portions of scale rows 3 and 4; a unicolored paraventral scale row; head pattern usually consisting of a complete pale nuchal band crossing posterior portion of parietals and ultimate supralabial; pale spot on snout; pale preocular and postocular spots; ventrals 136–153; and subcaudals 43–52.

Tantilla jani is a rare snake and notions about this species apparently are based largely on a series of snakes collected by J. R. Slevin on Volcán Zunil in Guatemala. Direct comparison of the lectotype of *T. jani* (BM 1946.1.8.68) with the series from Zunil and additional material at UTA reveals that two distinct taxa are represented.

DESCRIPTION OF LECTOTYPE OF *TANTILLA JANI* (BM 1946.1.8.68)

Middorsal stripe reduced to a series of small spots on the vertebral scale row; this series extending from about 8–9 scale lengths behind parietals to posterior portion of trunk; middorsal stripe poorly developed throughout, especially feeble on posterior third of body; individual spots comprising middorsal series on anterior portion of vertebral scales; narrow lateral stripe on about adjacent thirds of scale rows 3 and 4, extending from about level four scale lengths behind parietals to just beyond vent, becoming weak on posterior third of trunk; lateral stripe darkly bordered above on upper portion of scale row 4 and below on lower portion of scale row 3; scales on dorsum between pale lateral stripes (exclusive of vertebral spotting) medium brown with narrow dark brown edging along free margin of each dorsal scale; ventrolateral stripe distinctly darker brown than dorsum and occupying scale row 2, adjacent two thirds of scale row 1 (mostly uniform dark brown), and upper two thirds of scale row 3; except for a few anterior ventrals, lateral portions of all ventrals edged with dark brown spotting, becoming more conspicuous on posterior of trunk; lateral portion of each subcaudal with conspicuous dark brown edging; dorsum of head medium brown; lower portion of rostral dark brown, upper portion of rostral and adjacent portions of internasals and prenasals slightly paler than dorsum of head, but no prominent pale spot on top of snout; preocular spot involving adjacent portions of supralabials 1 and 2 and lower portion of postocular; transverse dark brown streak present on posterior part of each internasal; pale postocular spot involving supralabial 5 and narrow adjacent portions of supralabials 4 and 6, posterior half of lower postocular, and about anterior third of anterior temporal; brown pigment below eye darker than above, lip margin below eye narrowly edged with white; dark brown pigment posterior to postocular spot reaching margin of lip; nuchal collar discontinuous, interrupted middorsally and dorsolaterally, forming two distinct pale spots on dorsum of neck; each spot mostly on dorsal scale located in space between posterior ends of parietal and posterior temporal

and on edges of scales adjacent to this scale; pale mandibular spot involving posterior portion of ultimate supralabial and adjacent scales located posteriorly and above; chin mostly immaculate except for several small brown spots on mental and first two pairs of infralabials and larger blotches on infralabials 3, 4, and 6 which are mostly brown.

The lectotype of *T. jani* has 1 preocular, 2 postoculars, 7 supralabials, 6 infralabials, and 1+1 temporals per side, a loreal is absent, the anal scale is divided and there are 143 ventrals and 47 divided subcaudals. It is a female and has a HL of 7.8 mm, a HW of 5.3 mm, a TL of 242 mm, and a tail length of 50 mm (21% of TL).

COMMENTS ON *TANTILLA JANI*

The species described as *T. jani* by Günther (1895) was based on two specimens, one bearing locality data of only "Guatemala" and the other from "Nicaragua, Matagalpa, 3250 feet." Smith (1942:37) selected the Guatemalan specimen (BM 1946.1.8.68) as the lectotype of *T. jani*. The paralectotype was allocated to *T. alticola* by Wilson (1982:4).

Comparison of the lectotype of *T. jani* with the holotype of *T. cuesta* reveals little to distinguish the two. Both specimens are females and are similar in most aspects of proportion, habitus, scutellation, and color pattern. A conspicuous pair of pale spots is present on the nape of both individuals. These spots are slightly larger in the type of *T. cuesta* and involve more of the posterior tip of the parietals. Also, the pale spot on top of the snout is more conspicuous in the type of *T. cuesta*, but it is the same shape as in the lectotype of *T. jani* and has similar dark pigment bordering on the rostral, nasals, and posterior portion of the internasals. The most prominent difference between these specimens is the presence of a poorly defined vertebral line that is reduced to a series of small spots in *T. jani*. In *T. cuesta*, the vertebral scale row is uniformly brown. Intraspecific variation of striping is not uncommon in other species of *Tantilla* and can hardly constitute justification for regarding *T. jani* and *T. cuesta* as separate species. Although the type-locality of *T. jani* cannot be fixed any more precisely than the country of Guatemala, that for *T. cuesta* is located on the Pacific versant at 1050 m in the department of San Marcos near the Mexican border. Several small colubrids, including species in the genus *Ninia* and *Adelphicos* are known to exhibit considerable variation along the Pacific versant of Guatemala; the snakes darker in the west, which happens also to be a region of greater rainfall, and at higher elevations. Given the material at hand, I relegate *T. cuesta* Wilson (1982) to the synonymy of *T. jani* Günther (1895).

Assessing the taxonomic status of *Tantilla tayrae* Wilson (1983) is more problematical. This is another rare species that is known only from the type-series of five specimens. This taxon is known to reach 360 mm in TL, which is larger than any individual of *T. jani*. However, snakes representing these taxa are so rare in collections that no

conclusion regarding maximum size can be reached at this time. The head in *T. tayrae* appears to be proportionally more slender than in *T. jani*, the collar is interrupted dorsally, but not laterally, and middorsal and lateral pale lines on the body are absent or poorly indicated. Scutellation in *T. tayrae* is comparable to *T. jani* (140–146 ventrals and 44–49 subcaudals vs. 143–147 ventrals and 44–47 subcaudals, respectively). The type-locality of *T. tayrae* is on the Pacific slopes of Volcán Tacaná, a scant 25 km northwest of the type-locality of *T. cuesta*. Wilson (1983:57–58) suggested that *T. tayrae* was most closely related to *T. cuesta*, but thought that the differences between these taxa were sufficient to consider them valid species. Acquisition of additional material from the region may eventually allow reassessment of *T. tayrae*, supporting or refuting its recognition as a valid taxon.

Excluding *Tantilla tayrae* from the hypodigm, *T. jani* may be diagnosed as a small species of the *Tantilla taeniata* group reaching a maximum known TL of 242 mm that may be distinguished from all other members of the genus by having: (1) middorsal stripe absent or reduced to series of small spots on vertebral scale row; (2) pale lateral stripes narrow, occupying about adjacent thirds of scale rows 3 and 4, extending to about level of vent or proximal portion of tail, bordered above by dark brown pigment on upper portion of scale row 4; (3) ventrolateral stripe darker than dorsolateral pigmentation; (4) on anterior part of body, about two thirds of paraventral scale row dark brown and lower portion white or sparsely mottled with brown; at midbody, lower portion of paraventral scales mottled with brown or whitish or cream restricted to lower edge of scale; (5) lateral edges of ventrals with brown spotting; (6) venter white in preservative, unknown in life; (7) nuchal collar reduced to pair of pale spots; (8) single known male with 143 ventrals and 47 subcaudals, females with 143–147 ventrals and 44–47 subcaudals; and (9) tail comprising 17–21% of the total length in females.

An undescribed species has been referred to in the literature, at least in part, under the names *Tantilla fusca* (Slevin, 1939) or *T. jani* (Wilson, 1982, 1985; Wilson and Meyer, 1971). It may be known as

Tantilla vulcani new species

Holotype.—The University of Texas at Arlington (UTA) R-21772 (field no. JAC 12410), an adult female from Finca El Carmen, Km 197.5 on CA-2, 518 m, Quezaltenango, Guatemala, collected by Carlos Mirón in April–May 1986.

Paratypes.—All from Guatemala: *Escuintla*: Escuintla (CAS 71912); *San Marcos*: Malacatán, Finca Barranca Honda (UTA R-43560); *Suchitepéquez*: Volcán Zunil, Finca El Ciprés (CAS 66891–901, 66903, 66905–09).

Diagnosis.—A small species of the *Tantilla taeniata* group reaching a maximum known TL of 246 mm that may be distinguished from all other members of the genus by having: (1) middorsal stripe reduced to series of spots (one spot per vertebral scale), extending the length of the trunk,

but becoming ill-defined posteriorly; (2) pale lateral stripes occupying about adjacent thirds of scale rows 3 and 4, extending to about level of vent, but inconspicuous on posterior portion of trunk; (3) dark coloration (mottling) of ventrolateral stripe darker than dorsolateral pigmentation; (4) lower portion of paraventral scale row darkly pigmented, similar in coloration to upper part of scale; (5) lateral edges of ventrals darkly edged with pigment similar to paraventral scale row; (6) venter white in preserved specimens, color unknown in life; (7) nuchal collar complete, located on posterior third or fourth of parietals and extending 1–1.5 dorsal scale lengths posterior to parietals; (8) males with 139–147 ventrals and 40–51 subcaudals, females with 152–154 ventrals and 37–45 subcaudals; (9) tail comprising 20–22% of total length in males and 17–19% in females. This species is compared with other Guatemalan members of the *T. taeniata* group in Table 1.

Tantilla jani is similar to *T. vulcani* in having a middorsal stripe reduced to a series of spots, but in *T. jani* this stripe is more poorly defined and may even be absent. If present, the individual spots comprising the middorsal stripe in *T. jani* are located more toward the anterior end of individual scales (rather than about the center) and the stripe becomes almost totally obfuscated posteriorly. The nuchal collar in *T. jani* is reduced to a pair of spots and these barely encroach on the parietals, whereas it is complete and uninterrupted in *T. vulcani* and involves about the posterior third of the parietals. The dorsum of the head of *T. jani* is medium brown with some dark pigment laterally and peripheral to the pale nape spots; in *T. vulcani* the dorsum of the head is dark brown. *Tantilla vulcani* has a distinctive white spot on top of the snout, whereas in *T. jani* the anterior scales on the snout may be tan, but there is no conspicuous pale spot. Perhaps the most dramatic morphological difference between *T. jani* and *T. vulcani* is that the former has a relatively stout body with a head that is moderately distinct from the neck, whereas the latter is a slender species in which the head is not distinct from the neck.

Tantilla flavilineata, *impensa*, *oaxacae*, *reticulata*, *slavensi*, *striata*, *taeniata*, and *tecta* all differ from *T. vulcani* in having a continuous pale middorsal stripe; in *T. briggsi* and *T. cuniculator* the middorsal stripe is absent or, if present, faint and restricted to the anterior part of the body. *Tantilla vulcani* differs from most species having pale lateral stripes in that these stripes are not contiguous with a narrow dark edging, at least above the line. The lower portion of the paraventral scales is pale in *T. impensa*, *slavensi*, and *taeniata*. The nuchal collar is interrupted dorsally in *T. briggsi*, *reticulata*, *slavensi*, *tayrae*, and commonly in *impensa* and *oaxacae*. The number of ventrals is higher in both sexes of *T. flavilineata* (154–164), *T. impensa* (163–172), and *T. reticulata* (158–173) than in *T. vulcani* (139–154). The number of ventrals is higher in male (females unknown) *T. briggsi* (172) and female (males unknown) *T. slavensi* (158–159) than in *T. vulcani* (139–147 in males, 152–154 in females). The number of subcaudals is higher in both sexes

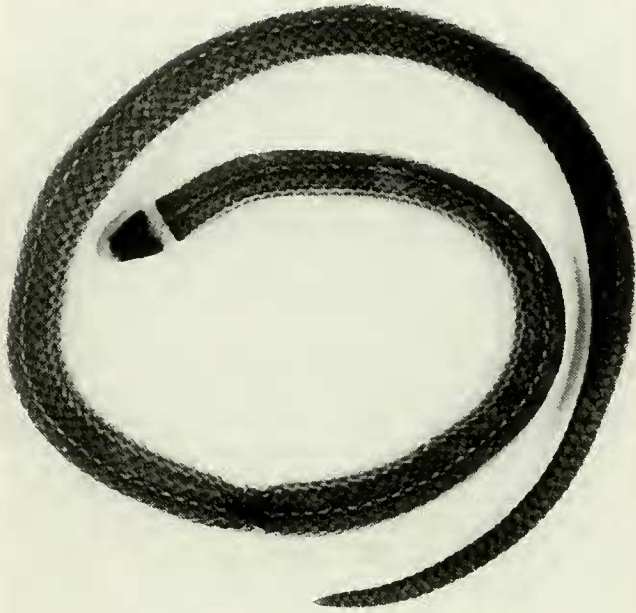


Fig. 4. *Tantilla vulcani* (UTA R-21772)—holotype, an adult female, 211 mm TL.

of *T. impensa* (68–72) and *T. reticulata* (58–67) than in *T. vulcani* (37–51), and higher in male (females unknown) *T. briggsi* (68) and female (males unknown) *T. slavensi* (52–56) and *T. tecta* (54) than in *T. vulcani* (40–51 in males, 37–45 in females).

Description of holotype.—Adult female (Fig. 4), 211 mm in total length; tail length 35 mm (17% of total); head length 6.5 mm from front face of rostral to posterior end of mandible; head width 3.8 mm at broadest point (at level of angle of mouth); head no wider than neck; snout rounded in dorsal view; eye moderate, snout about 2.0 times as long as horizontal distance across eye; pupil circular; rostral about 1.5 times broader than high; internasals 1.0 times wider than long, laterally in contact with anterior and posterior nasals; prefrontals large, slightly wider than long, laterally in contact with posterior nasal, second supralabial, and preocular; median prefrontal suture 0.4 times as long as frontal; frontal about 1.1 times longer than wide; parietals 1.9 times longer than wide, median suture 1.1 of frontal length; nasals completely divided, nostril located mostly in posterior portion of anterior nasal; no loreal; 1/1 preoculars; 2/2 postoculars; anterior and posterior temporals fused, separating supralabials 5–7 from parietal; supralabials 7/7, first in contact with nasals, second in contact with postnasal, second supralabial, and preocular, third in contact with preocular, third and fourth in contact with orbit, fifth and sixth in contact with anterior temporal, and seventh the largest and in contact with single elongate temporal; mental about twice as broad as long, not contacting anterior pair of chinshields; anterior chinshields well developed, about twice as long as wide; posterior chinshields not well differentiated from gulars,

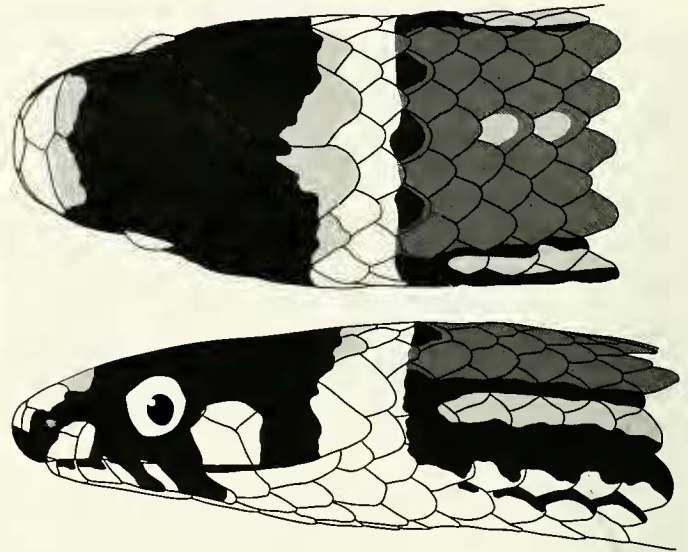


Fig. 5. Dorsal (upper) and lateral (lower) aspects of the head of *Tantilla vulcani* (UTA R-21772—holotype), head length 5.9 mm from front face of rostral to posterior end of mandible.

about half of size of anterior chinshields; posterior chinshields separated from first ventral by two gulars and three preventrals; infralabials 6/6, first pair in contact along ventral midline, first four pairs in contact with anterior chinshields, fourth pair largest; dorsal scales smooth, in 15 longitudinal rows throughout length of body, no apical pits apparent; dorsal scales in 4 rows at level of tenth subcaudal; ventrals 152; anal divided; subcaudals 38, paired; anal glands extending posteriorly for length of two subcaudals.

In preservative (alcohol after formalin), faint beige middorsal series of spots on vertebral scale row, one spot per scale, located in about center of scale; series of spots beginning 1.5 scale lengths posterior of pale nuchal collar and extending to level just anterior to vent, spots surrounded by dark mottling on adjacent portions of vertebral and paravertebral scale row, but dark mottling not concentrated into well defined lines; beige lateral stripe on adjacent halves of scale rows 3 and 4, extending posteriorly from about half a scale length behind nuchal collar for about three fourths of trunk, bordered above on upper portion of scale row 4 by dark gray-brown; ground color of scale rows 5 and 6 pale brown; scale rows 1 and 2 and upper portion of 3 mottled with gray-brown, conspicuously darker than rows 5 and 6; gray-brown extending onto lateral edges of ventrals and subcaudals; white collar complete, involving about posterior third of parietals (mostly pale tan), posterior portion of temporal, and about posterior half of ultimate supralabial; collar extending about one scale length posterior to tips of parietals; preocular spot on supralabials 1 and 2 and postnasal (Fig. 5); dark pigment below eye reaching lip margin; postocular spot on supralabial 5 and anterior portion of supralabial 6 and temporal; a distinct white spot on top of snout on upper ros-

tral, medial portion of prenasals, most of internasals, and anterior portion of prefrontals (the latter scales mostly tan); some dark spotting on mental and infralabials 1–6, especially along lip margin, almost all of infralabial 4 dark; other than dark lateral edging, ventrals and subcaudals white.

The right maxillary bears 17 stout, short teeth; the anterior 14 are relatively small and increase in size posteriorly; a small diastema separates the last three teeth which are much enlarged and have lateral grooves. The distal portion of all maxillary teeth is compressed anteroposteriorly and blade-like.

Variation.—There are 11 males and eight females in the type-series. The largest male is 246 mm in TL with a tail of 50 mm (20% of total). The largest female has a TL of 227 mm and a tail of 44 mm (19% of total). The tail/TL ratio is 20–22% for males and 17–19% for females. Males have 139–147 ventrals and 40–51 subcaudals; females have 152–154 ventrals and 38–45 subcaudals. One specimen has only five infralabials on one side. The middorsal and lateral stripes in all specimens are more conspicuous anteriorly, but may reach the level of the vent or even onto the proximal portion of the tail in some individuals. Adjacent halves of scale rows 2 and 3 are dark, forming longitudinal lines, at least anteriorly, in most individuals. The middorsal stripe begins about 2 or 3 scale lengths behind the collar and the lateral strips are separated from the collar by 0.5–1 scale length. In some specimens, a pale, rather vague, ventrolateral stripe is evident on the lower portion of scale row 2 and extends to about midbody. The postocular spot commonly involves the lower postocular scale. The fusion of the anterior and posterior temporals in the holotype is obviously an anomalous condition.

Etymology.—The species name is a noun in the genitive case, offered in tribute to Vulcan, the Roman God of fire, in allusion to the habitat of this species on the Pa-

cific versant of Guatemala, which is dominated by a series of spectacular Quaternary volcanoes, some still active.

Distribution and Natural History.—On the Pacific versant of Guatemala from near the Mexican border to south-central Guatemala, the species is known from near Malacatán in the Department of San Marcos to near Escuintla in the Department of Escuintla, where it occurs on the lower, southern slopes of Volcán Tajumulco, Volcán Chiquibal, Volcán Zunil, and Volcán de Agua at elevations of 518–610 m.

The largest series of this species comes from Finca El Ciprés, a coffee plantation which Slevin (1939) described as having much of the original forest remaining and some grassland interspersed between the coffee groves and the base of Volcán Zunil. UTA R-43560 was collected at about 2030 hr on 29 March 1997 as it crossed a road in a coffee grove. This individual, 183 mm in SVL, was maintained alive for a short time and laid two eggs in late April.

For the most part, most members of the *Tantilla taeniata* group in Guatemala seems to be geographically and ecologically segregated. No examples of sympatry are known, although two species may inhabit the same general region. *Tantilla jani* and *T. vulcani* occur in mesic tropical and subtropical forest on the Pacific versant; it is possible that these species are elevationally segregated with *T. jani* occurring at higher elevations. *Tantilla impensa* occurs in tropical, mesic forests of the Atlantic versant and *T. taeniata* is present in seasonal pine-oak forest in the southeastern Guatemalan highlands and the adjacent Antigua Basin of the Guatemalan Plateau. Two species in the *T. taeniata* group inhabit the seasonally dry tropical lowlands of Petén, but are known from too few specimens to assess their distribution. In Guatemala, *T. cuniculator* has been taken only from the Parque Nacional Tikal and *T. tecta* is known only from near Laguna Yaxhá.

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APPENDIX

Localities are given here only for *Tantilla jani* and *T. taeniata*. Representative material for other taxa within the *T. taeniata* group has been examined in the CAS, KU, MVZ, and UTA. See species descriptions for material examined of *T. impensa* and *T. jani*.

Tantilla jani

GUATEMALA: San Marcos: Finca Santa Julia, 1.5 km E San Rafael Pie de la Cuesta, 1050 m (MVZ 146762-63, holotype and paratype, respectively, of *T. cuesta*); no other data (BM 1946.1.8.68—lectotype of *T. jani*).

Tantilla taeniata

GUATEMALA: Guatemala: Colonia Bran, Zona 3, Guatemala City, ca. 1500 m (UTA R-22849); Colonia Santa Isabel II, Zona 7, Guatemala City, ca. 1500 m (UTA R-28533); Sacatepéquez: Antigua Guatemala, ca. 1550 m (UTA R-29935); Santa Rosa: ca. 125 m from the edge of Laguna El Pino, Parque Nacional El Pino, Santa Rosa, Guatemala (14° 21' N, 90° 24' W) (UTA R-21774); Parque Nacional Laguna El Pino, 1097 m (UTA R-22848); no other data (MNHNP 1666—type of *T. taeniata*), (NHMB 2119—type of *Homalocranium trivittatum*).

